Niger 1998/99
Current Vulnerability Assessment

February 1999

Famine Early Warning System Project

U.S. Agency for International Development

Table of Contents

List of Abbreviations

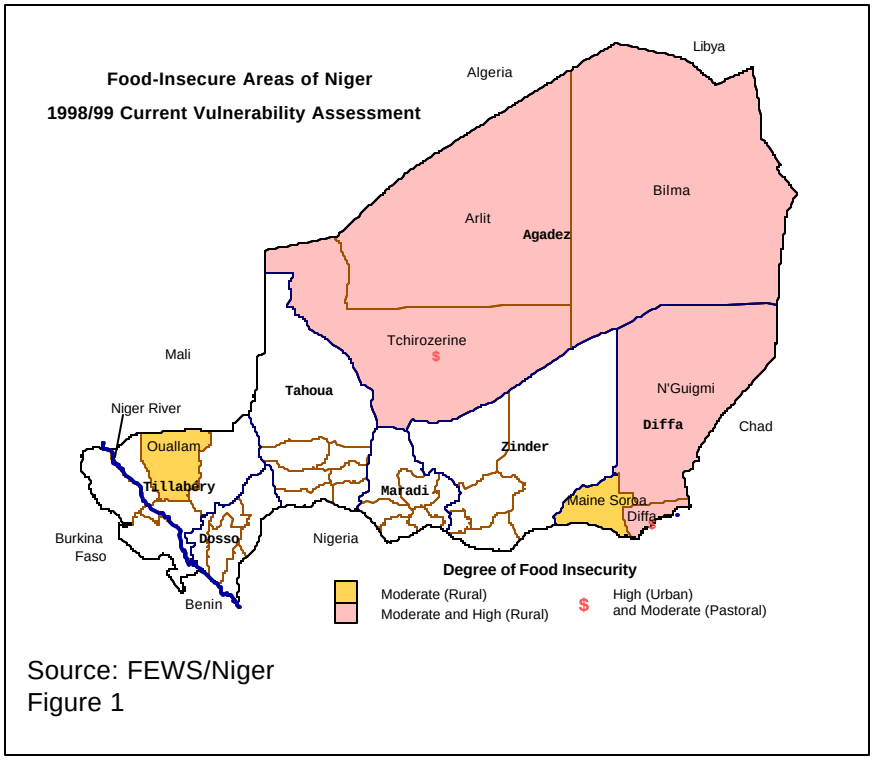
GON – Government of Niger
MRDHE - Ministry of Rural Development, Hydrology, and Environment
WFP – World Food Program

Executive Summary

This current vulnerability assessment (CFSA) considers the effect of events during the January 1998 to January 1999 period on the ability of populations to meet their food needs between February 1999 and October 1999.

The 1998/99 agricultural season started late but abundant, well distributed rainfall in time and space from mid-July throughout September resulted in a record harvest. The Ministry of Rural Development Hydraulic and Environment preliminary harvest estimate indicates gross production of over 3 million MT of cereals. This figure is 37 percent higher than the 1993/94-1997/98 average and 77 percent higher than the 1997/98 harvest. Out of the seven departments in Niger, only the departments of Agadez and Diffa, which are not cereal producing zones, are deficit in basic cereals: millet and sorghum. These departments are mainly pastoral zones that trade livestock and vegetables products to meet their food needs. The Ministry has also released a global estimate of cowpea production based on average yield and area cultivated. This figure is 133 percent above average. Overall pasture and water conditions are favorable and are considered adequate to nourish the herds. The Niger River is at its highest level compared to previous years, thus allowing good off-season gardening.

The domestic cereal balance from production and stocks is 140,000 MT. With planned imports of 190,000 MT, Niger has a positive cereal balance of 344,000 MT at the national level. This is a striking improvement over last year's negative cereal balance of 126,550 MT.

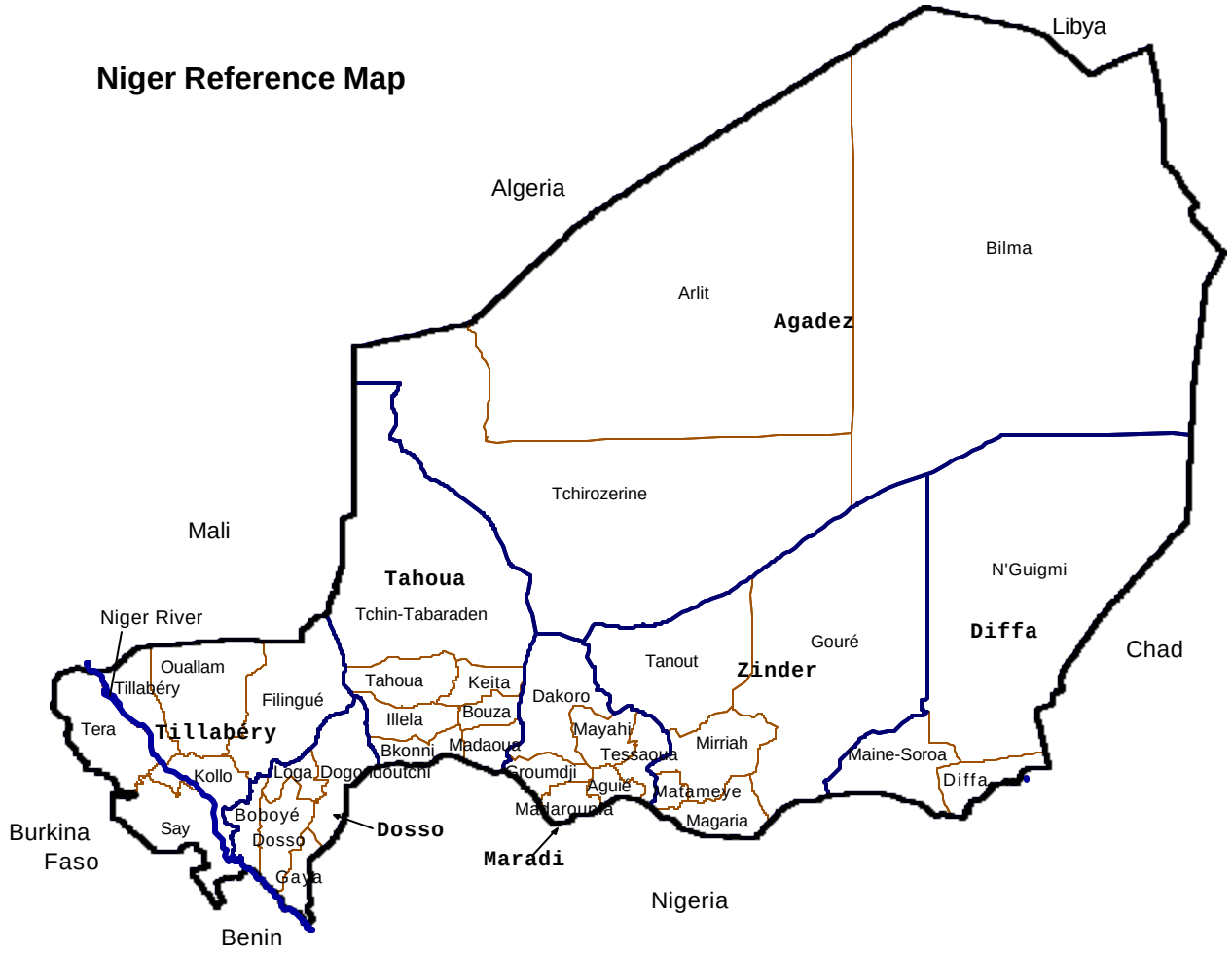


Source: FEWS/Niger
Figure 1

Despite above average cereal production at the national level, 348,000 farmers, agro-pastoralists, pastoralists and urban residents reside in the Department of Agadez and in the arrondissements of Diffa and N'Guigmi are highly food insecure, and 437,000 are moderately food insecure in the arrondissements of Maine Soroa (Diffa) and Ouallam (Tillabery) (figure 1).

The highly food-insecure populations in the Department of Agadez and Diffa need outside assistance, preferably in a form of food-for-work programs. The food-for-work programs such as rehabilitation of water sources (a major pre-occupation of the populations) and off-season gardening to diversify dietary intake will help populations that have exhausted their resources over the last few years preserve their remaining assets. Because the populations of Ouallam and Maine Soroa Arrondissements have depleted their assets for the last four to five consecutive years, they might become highly food insecure if cereal prices deviate from the normal pattern, if the final production estimates are lower than pre-harvest estimates, as was the case last year, or if income from secondary activities is compromised. Most farmers in Niger are net buyers of cereals during the hungry period, even in good production years. However, this year in particular due to poor harvest over the last four-five years farmers were obliged to sell their crops at low prices right after harvest to pay debts and replace working utensils sold to purchase cereals during the 1997/98 hungry period. Positioning of cereals in food-insecure areas would facilitate market interventions if conditions deteriorate.

Figure 2. NIGER Reference Map



Source: FEWS

I. Introduction

This Current Vulnerability Assessment (CVA) focuses on current or transitory food insecurity (see Key Terms box).

For the current consumption period (November 1998 and October 1999), it:

- evaluates whether there will be enough food available at the national level to meet the consumption needs of the entire population
- identifies Arrondissements where the 'average' household is likely to be food insecure
- describes the extent to which households in these Arrondissements are food insecure and provides a basis for determining where concerted monitoring and possible interventions (including emergency food aid) may be needed
- summarizes the actions that are being taken or need to be taken to respond to any food emergencies.

Key Terms

Food security is a measure of whether an individual, household, community, or population group has access to sufficient foods that meet dietary needs and preferences for an active life.

- *Food availability is defined as the amount of food that is, and will be, physically available in the country during the current consumption year through a combination of domestic production, stocks, or net imports (imports minus exports).*
- *Food accessibility refers to a household's ability to acquire available food for the current consumption year through a combination of its own production and stocks, market transactions, or transfers.*

Food insecurity, in contrast, is the lack of access to enough food. There are two kinds of food insecurity: chronic and current.

- *Chronic (or long-term) food insecurity* is a continuously inadequate diet caused by the inability to acquire food. It affects households that persistently lack the ability either to buy enough food or to produce their own.
- *Current (or transitory) food insecurity* is a temporary decline in a household's access to enough food. It results from instability in food prices, food production, or household incomes.
  (Adapted from World Bank, 1986)

In Current Vulnerability Assessments, which focus on current food insecurity, FEWS classifies areas, or specific socioeconomic groups within areas, as food secure or food insecure. In food-secure areas, an average household can maintain normal seasonal consumption patterns in the current year without altering normal income or savings strategies. In food-insecure areas, this is not the case.

To assist decision-makers in prioritizing emergency food allocations within and between countries, FEWS classifies populations in food-insecure areas by degree of food insecurity:

- **Extremely food-insecure** populations have depleted their asset base to such an extent that without immediate outside assistance, they will face famine. Appropriate interventions include emergency food distributions and long-term rehabilitation programs.
- **Highly food-insecure** populations will have to reduce consumption or draw down assets to such an extent that they could compromise their future food security. Appropriate interventions include nutritional support for vulnerable groups, food for work, income and asset support, and market interventions.
- **Moderately food-insecure** populations can maintain normal seasonal consumption patterns in the current year, but only by drawing down savings or relying heavily on secondary income activities. Should market access or income from secondary activities be compromised, these populations might become highly food insecure in the current year. No interventions are necessary, but contingency plans should be developed to respond if conditions deteriorate.

II. National Food Security

A. Domestic Food Availability

There are two main components of domestic food availability: national food production and food stocks.

1. Production

The Provisional production figures from Niger's Ministry of Rural Development, Hydrology, and Environment (MRDHE) indicate a record gross harvest of 3,041,900 MT of rainfed millet, maize, sorghum, rice, and wheat. This figure is 77 higher than the production of 1997/98 and 37 percent higher than the five-year

Table 1. Comparison of 1998/99 Provisional Gross Production Estimates With Final Estimates for 1997/98 and Average (1993/94-1997/98)

Season	Cereal					
	Millet	Sorghum	Maize	Rice	Wheat	Total
1998/99 (MT)	2,440,967	533,256	6,900	53,500	7,300	3,041,900
1997/98 (MT)	1,353,800	292,800	4,500	61,800	8,400	1,721,300
Average (MT)	1,795,196	364,548	3,088	53,468	4,707	2,221,293
Difference in % 1998/99 vs 1997/98	81	84	53	-13	-13	77
Difference in % 1998/99 vs Average	36	46	123	-1	55	37

Source: MRDHE, CILSS\DIAPER

average (1993/94-1997/98). Production of all cereals except rice is above average. Estimated rice production fell relative to last year because of floods which washed away approximately 20 percent of total rice production this year.

2. Stocks

As of October 1998, estimated opening stocks for the 1998/99 consumption year included 20,167 MT of stocks held by the GON security stocks which was provided by donors and 2,192 MT of WFP stocks. The security stocks are not necessarily available for emergency interventions; cereals can only be removed if the Government or a donor pledges an equivalent replacement amount. Private stocks exist but there is no system in place to quantify them.

B. Food Requirements

Food requirements for the year include food use and closing stocks, including requirements for replenishing the national security stocks .

1. Population

The National Statistics Office estimates the country's mid-1999 population at 9,798,195. The population is derived from the 1988 census using a 3 percent growth rate.

2. Consumption Requirements

The national consumption requirement is estimated at 2,219,555 MT of which 2,096,685 Mt for millet and sorghum ; 98,766 MT for rice and 24,104 MT of wheat.

3. Closing Stocks

Estimated closing stocks include 200,000 MT of farmers stocks of traditional cereals (millet and sorghum) and 40 MT of other stocks. This is a relatively high estimate – especially compared with last year when estimated farmer closing stocks were estimated at 0. The high estimate reflects the fact that Niger has a production surplus (production minus consumption needs) of just over 100,000 MT and net surplus of over 300,000 MT(including imports and food aid pledges).

C. Trade

1. Projected Exports

There are no official projected exports for the 1998/99 consumption year. While it is anticipated there will be minor informal exports, there are no estimates available and the quantities involved are minor in national terms.

2. Import Requirement

With domestic production and stocks exceeding consumption needs in 1998/99, there is no import requirement.

3. Projected Commercial Imports

The Government projects commercial cereal imports for 1998/99 at approximately 190,000 MT: 100,000 MT of maize, 80,000 MT of rice, and 10,000 MT of wheat. This estimate is based on data obtained by the Market Information System (SIM) from border sanitary control posts from November 1997 through October 1998. This estimate is 67 percent lower than the actual 581,408 MT imported last year but it is within the range of the annual flows of 80,000 MT to 100,000 MT since the devaluation of the FCFA in 1994. Prior to 1994, annual cereal flow between Niger and Nigeria alone was estimated at between 150,000 MT to 200,000 MT. Due to the record harvest, millet imports are expected to be negligible, maize and wheat import estimates are the same as previous years,

and rice imports estimates are slightly higher due to the loss of approximately 20 percent of irrigated rice production around the Niger River because of floods.

4. Projected Food Aid Imports

Food aid pledges as of the end of October 1998, amounted to 14,128 MT.

D. National Food Balance

Based on the preliminary 1998/99 harvest estimates, the national food balance, when considering rainfed and irrigated production, available stocks, food aid and potential imports, results in a national production surplus of over 200,000 MT, (using GON consumption rate) and 300,000 MT (using FEWS consumption rate).[1] Thus, national consumption needs should be covered until the next harvest. Table 2 shows the national cereals balance based on USAID/FEWS consumption rate.

Table 2. Preliminary Cereal Balance for 1998/99

	Rice	Wheat	Traditional Cereals	Total
Population through 4/30/1999				9,798,195
Availability	37,354	7,128	2,555,605	2,600,087
Production				
Gross production	53,468	7300	2,981,124	3,041,892
Net production[1]	34,754	6205	2,533,956	2,574,915
Initial stocks as of 11/1/98	2,600	923	21,649	25,172
Farmer	0	0	0	0
Other	2,600	923	21,649	25,172
Needs	98,766	24,104	2,336,685	2,459,555
Human consumption[1]	98,766	24,104	2,096,685	2,219,555
Final stocks	0	0	240,000	240,000
Farmer	—	—	200,000	200,000
Other	0	0	40,000	40,000
III. Gross Surplus (+) or Deficit (-)	–61,412	–16976	+218,920	+140,532
IV. Imports/Exports	85,000	14,796	104,332	204,128
Projected Commercial Imports	80,000	10,000	100,000	190,000
Projected food aid	5,000	4,796	4,332	14,128
Projected exports	0	0	0	0
V. Net Surplus (+) or Deficit (-)	23,588	-2,180	+323,252	+344,660
VI. Per Capita Cereal Availability[1] **(kg)**	12.5	2.24	271.5	286.2

Sources: MRDHE, CILSS\DIAPER

[1] The range of values comes from different consumption rates used by FEWS and the GON. FEWS/USAID uses an annual consumption rate of 190/kgs/person/year for nomadic and urban groups, and 220/kgs/person/year for sedentary farmers. The GON uses consumption rates of 200 and 250, respectively.

E. Caveats, Risk, and Uncertainty

Preliminary harvest estimates for the last five years have been higher than post harvest estimates, ranging from 15 percent higher in 1993/94 to 24 percent higher in 1997/98. The post-harvest figures take into account the quality of the end of the rainy season, pest damage, and other factors that reduce yield. So, the favorable food security outlook could change if the final production result significantly lower than the preliminary harvest.

In addition, fuel price increases in Nigeria will raise food transport costs in Niger and the price of other products imported from Nigeria. While the fuel price increase has not affected gasoline prices at the major stations such as ELF, Total, Shell, it has affected the black market price of imported gasoline from Nigeria.

II. Household Food Security

A. Objective of the Analysis (FEWS Terms)

The objective of the analysis of food security at the household level is to:

- identify Arrondissments where the 'average' household is likely to be food insecure
- describe the extent to which households in these Arrondissements are food insecure and provide a basis for determining where concerted monitoring and possible interventions (including emergency food aid) may be needed.

B. Conceptual Approach and the Level of Analysis

1. Definition of Household Food Security

2. Level of Analysis

The CVA is founded on a model of household income, or more specifically, strategies households use to acquire food. Although the conceptual framework is based on the household, the CVA takes the Arrondissement , that is the 3rd order administrative unit, as the unit for analysis. This is done for two reasons: Arrondissement -level data are available, unlike household, village, or canton-level (4th order administrative level) data, and emergency responses to food insecurity or mitigation efforts focus on administrative units rather than households. In taking the Arrondissement as the unit of analysis, CVA conclusions apply to an 'average' household in the Arrondissement, but do not necessarily hold for the poorest and richest households within an Arrondissement.

3. Socio economic groups

This CVA considers current food access of farmers/agropastoralist, pastoralists and urban residents.

Farmers/Agropastoralists

Farmers and agro-pastoralists comprise 80 percent of the total population in Niger. They are localized in the southern half of Niger, where annual rainfall levels vary between 400 and 800 mm. They derive their main part of their income from cereal production, with important secondary contributions from livestock, cowpeas (an important cash crop), remittances from family members in exode, market gardening, charcoal and firewood production, and artisanal activities such as mat and jewelry making. Their ability to meet food needs is highly correlated with local harvest levels, cereal prices, cowpea-to-cereal and livestock-to-cereal terms of trade, and economic conditions in Nigeria and the coastal countries for remittances.

Pastoralists

Pastoralists account for 3.8 percent of the total population in Niger. They reside in all Departments but are represented in significant numbers in southern Agadez (Arlit) and northern parts of Maradi (Dakoro Arrondissement), Tahoua (Tchintabaraden and Abalak), Tillabery (Filingué and Tera) and Zinder (Gouré and Tanout). Pastoralists derive their income almost exclusively from animal and dairy product sales. Income determinants are herd size and composition, whether they are herd owners or herd tenders, herd health, and pasture availability. Their mobility makes them much less vulnerable to variations in rainfall than farmers. They depend on the market for cereal purchases and their purchasing power fluctuates with changes in cereal prices.

Urban Populations

The urban populations represent 16.2 percent of the total population. They derive their income from salaried jobs, small commerce, wage labor, and artisan activities. Urban populations have been more affected by economic decline in Niger than their rural counterparts especially since the devaluation of the FCFA in January 1994. Government employees have been paid irregularly for more than five years. This reduced income of government employees, besides affecting their immediate dependents, affects small service providers who depend on government employees for their income. In addition, the government of Niger is in the process of reducing government employees and privatizing parastatals and as a result many people are forced into informal sector which results in loss of pensions, health benefits and variability in incomes. Furthermore, many projects and private enterprises in most parts of the country

have closed due to civil insecurity, political instability, and the high cost of production (water, electricity, transport) in Niger.

4. Methodology

Both quantitative and qualitative information was used: data from remotely sensed data bases, statistics and reports from the Government of Niger (GON). FEWS/Niger is currently in the process to integrate the findings of the HHLS into the next vulnerability assessment.

C. Household Food Availability

1. Production

The traditional surplus Departments in Niger are Dosso and Maradi and the southern parts of Tahoua, Tillabery, and Zinder Departments[2]. After harvest, traders and cooperatives collect cereals from these Departments to supply deficit zones. In addition, Nigeria, Benin, and Mali are important sources of cereal supply. This year all Departments had above average production, resulting in a large production surpluses in Maradi, Dosso, Zinder, and Tahoua (table 3). Tillabery department, which on average experiences large production deficits, registered a slight surplus of approximately 2,000 MT. Even though the Department of Diffa is not a cereal producing zones, this year's production, which was 30 percent above average, helped to cut the size of the average deficit by more than half. The large surpluses in Maradi, Zinder, Tahoua and Dosso will help to fill production deficits in the Departments of Agadez and Diffa.

While availability in surplus zones is sufficient to fill deficits, two factors could limit cereal flows in 1999: high fuel prices and civil insecurity in the Departments of Agadez, Diffa and northern parts of Tahoua.

2. Stocks

After the poor cereal production of 1997/98, carryover stocks in rural areas are considered to be non-existent.

[2] Both Maradi and Dosso had very poor production in 1996/97 and 1997/98. Thus in Table 3, Dosso's average cereal balance from local production (stocks and trade not accounted for) is negative and Maradi shows a surplus of only 32,456 MT.

Table 3. Cereal Availability from Local Production

Department	Average Net Production (Kg/Cap)	1998/99 Net Production Kg/Cap	1998/99 Net Production vs Average (% difference)	Average Cereal Balance (MT)	1998/99 Cereal Balance (MT)
Agadez	4	21	415	-57,581	-57,744
Diffa	134	175	30	-22,697	-7,486
Dosso	239	282	18	-7,416	91,738
Maradi	255	309	21	32,456	178,938
Tahoua	155	211	36	-8,144	117,891
Tillabery	249	287	15	-160,654	2,393
Zinder	236	273	16	-12,285	108,376

Source: Ministry of Rural Development, Hydrology and Environment

D. Current Food Security Status

Farmers and agro-pastoralists

Cereal production was above average for 1998/99 across most of Niger. Percentage of needs met through cereal production at the arrondissement level was above average in most of the cereal producing zones and as a result most farmers are food secure. The Ministry also reports that cowpea production was 130 percent higher than average at the national level, but no data is available at the arrondissement level. Overall pasture and water conditions are favorable and are considered adequate to nourish the herds. The Niger River is at its highest level compared to previous years, thus allowing good off-season gardening.

Dosso Department, which on average meets 109 percent of its consumption needs, met 130 percent of its needs in 1998. At the arrondissement level, all the arrondissements met above their average consumption requirement, ranging from 13 percent in Dogondoutchi to 28 percent in Boboye. In the parts of Gaya Arrondissement located near the Niger River, households practice fishing and off-season gardening. In addition, the proximity of Dosso Department to Nigeria provides households with diverse alternative income sources. As a result, farmers and agro-pastoralists in the Department of Dosso are considered food secure in 1999.

Tahoua Department, which on average meets 102 percent of its consumption requirement, met 133 percent of its needs from 1998/99 production. All the arrondissements met above their average consumption requirement ranging from 13 percent in Bouza to 53 percent in Tchintabaraden. Several arrondissements in Tahoua have diverse source of alternative incomes such as onions and cotton in Madaoua, Tahoua, and Konni. The presence of Project Keita in the arrondissements of Keita and Bouza helps the populations in many aspects. As a result the farmers and agro-pastoralists in Tahoua are considered food secure in 1999.

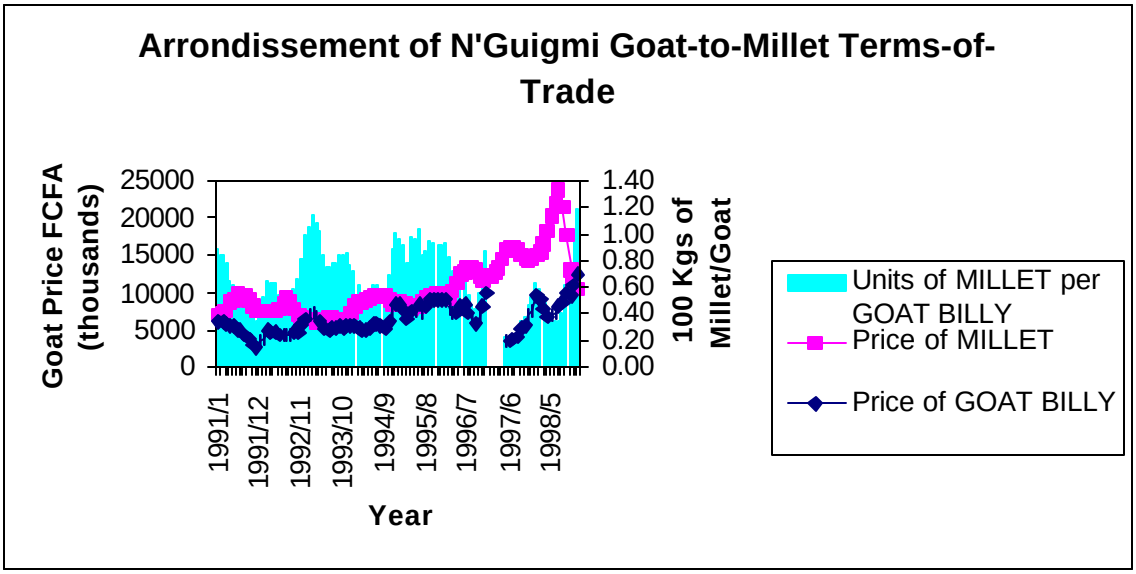
In the Department of Maradi, the bread basket of Niger, cereal production at the Department level was well-above average. While two cereal producing arrondissements (Aguie and Guidan Roumdji) experienced a third consecutive year of below average production, they still met 100 percent of their needs. Farmers and pastoralists in these two arrondissements, as well those in most of the arrondissements in the Department, also have access to diverse sources of income (cash crops such as souchet, peanuts and cowpeas). As a result, they are considered food secure.

Tillabery Department, which on average meets only 82 percent of its consumption requirement, produced 100 percent of its needs in 1998/99. This year marks the first good production year Tillabery Department has had since 1995. The poor harvest of 1997/98 was especially poor, with the Department meeting only 31 percent of its consumption needs. At the arrondissement level, production was above average in almost all the arrondissements. With the exception of Ouallam, populations in all the arrondissements of Tillabery are considered food secure.

In Ouallam, while estimated cereal production is above average, Normalized Vegetative Index (NDVI) images show that seasonal vegetation levels were below average in both the agricultural and pastoral areas, indicating the probability that the preliminary harvest was overestimated. Last year the post-harvest production estimate for Ouallam was 62 percent lower than the preliminary estimate. While cereal prices in Ouallam, like in the rest of the country, decreased sharply after harvest and goat-to-millet terms-of-trade have also been improving since November 1998, households have very few alternative income generating activities and have suffered 5 consecutive years of poor production prior to this year. This year's good harvest and livestock conditions will allow them to begin recovery, but it cannot compensate for year's heavy reliance on coping mechanisms. While Ouallam is only 100 km north of Niamey, access to market is very difficult due to bad roads. The populations of Ouallam are considered moderately food insecure.

Zinder Department, which on average meets 97 percent of their consumption needs, met 127 in 1998. Most of the arrondissement has registered above average production except Matameye, which registered 10 percent below average production but still met over 100 percent of its consumption needs. Even though this is the second year in a row that the arrondissement of Matameye registered a production shortfall compared to the average, the arrondissement has a high potential for off-season gardening and could compensate for the production shortfall. Cereal prices like in the rest of the country decreased sharply after harvest. Goat-to-millet terms-of-trade have improved in the pastoral zones but declined in the cereal producing zones as farmers convert some of their harvest bounty into livestock, increasing demand and driving up livestock prices. All indicators point to good food security conditions in the Department and populations are food secure.

In Diffa Department, after five consecutive years of poor production, the 1998/99 cereal production was 30 percent above average. Most of the increase came from the arrondissement of Maine Soroa. Last year post-harvest production figure in Maine Soroa was 87 percent lower than the preliminary harvest figure. The arrondissements of Diffa and N'Guigmi which on the average meet 65 and 51 percent of their needs met 69 and 27 percent of their needs, respectively. All three arrondissements came through a very poor harvests in 1997/98 and according to the final production figures, the arrondissements of Diffa, Maine Soroa and N'Guigmi met only 11, 8 and 2 percent of their consumption requirement, respectively. Normalized Vegetative Index (NDVI) images show seasonal vegetative levels above average in the arrondissements of Diffa and N'Guigmi both in the pastoral and agricultural zones and average vegetative conditions in the agricultural zone of the arrondissement of Maine Soroa. However, the Ministry of Rural Development Hydraulic and Environment (MRDHE) estimate of fodder production for the Department (rangeland plus agricultural residue) indicate a deficit of approximately 454 MT of dry matter. The Ministry also reports abundant water sources thus assuring the needs of the herds. Terms-of-Trade Goat/millet has continued to improve since November and at the end of January was above average (figure 3). However, small ruminants which, are the households cash reserve to purchase cereals have been exhausted due to the need to sell 3-4 small ruminants in order to purchase a sac of 100 kilos of millet for the last three years. The 1998/99 production of



irrigated peppers, one of the major cash crops, in the arrondissements of Diffa and Maine Soroa is also reported to be above average thus assuring an alternative income sources. Despite the above average production reported, many poor farmers will rely on the market during the hungry period (March-September) since most of the poor farmers do not produce enough to cover their consumption needs. Also, they have already sold part of their production right

after harvest to pay debts incurred during the last very difficult hungry period. The populations in these arrondissements have exhausted their resources over the last five years leaving them with reduced resources to purchase cereals in 1999. Income generating activities are limited and further reduced by banditry; very few NGOs intervene in the department; lack of liquidity (cash) of the population coupled with the long distance that separates the department from the cereal producing zones limit traders to adequately supply the Department. As a result, the arrondissements of Diffa, Diffa city and N'Guigmi are considered highly food insecure and the arrondissement of Maine Soroa moderately food insecure.

The agropastoralist in the western Agadez are sedentarized herders who depend heavily upon small-scale, irrigated crops, livestock production, and other sources of income rather than rainfed cereal production. The MRDHE reports above average production of maize and wheat. Field reports indicate abundant water sources and excellent pasture. Millet prices have declined sharply since September 1998, but remain above average as of the end of January 1999. The sharp decrease of millet prices has improved the terms-of-trade goat to millet. However, due to civil insecurity, food and human transportation continues to take place mainly via military convoy thus increasing the cost of cereal. In addition, civil strife since 1990 has caused the closure of many projects that had facilitated income generation creating high unemployment. The government's promise to integrate ex-rebels into the civil service is not going well due to lack of financial resources thus leaving many ex-rebels without job. Due to civil insecurity, lack of unemployment, and limited income generating activities, the arrondissements of Arlit, Bilma and Tchirozerine are considered highly food insecure.

Pastoralists

MRDHE reports that the Departments of Maradi, Zinder, Tahoua, Tillabery and Dosso have adequate fodder production for normal herd concentrations except the Department of Diffa. No data was available for the Department of Agadez but field report indicates excellent pasture. The Ministry also reports abundant water sources and that ponds in many pastoral areas are filled. However, two to three months after the rainy season many of the water sources might not be available since there is no water retention system in Niger. In addition, in some areas where pasture is abundant there are no ponds or wells and as a result the pasture is not used. In Agadez, Diffa, Tahoua and Tillabery Departments civil insecurity continues to disrupt cereal flow and hindered animal movements. Cereal prices have decreased since harvest and as a result terms-of-trade has improved but the higher cereal prices since 1996 have forced pastoralists to sell 3-4 goats to purchase a sac (100kg) of millet thus reducing their herd size. Also, they depend on the market for cereal purchases and their cereal prices fluctuates with changes in terms of trade between livestock and cereals and if cereal prices increases beyond the normal level would affect them. Due to civil insecurity, depleted assets, pastoralists in Ouallam (Tillabery Department), and in all the arrondissements of Diffa and Agadez are moderately food insecure.

Table 4: Recent Harvest Outcomes[3]

	Share of Needs Met through Production (%)				Needs Met Relative to Average (% Difference)		
DEPARTMENT/ ARRONDISSEMENT	Average	1996/97	1997/98	1998/99	1996/97	1997/98	1998/99
AGADEZ							
ARLIT	1	0	0	6	-100	-100	962
BILMA	0	0	0	0	0	0	0
TCHIROZERINE	3	4	1	20	20	-50	585
DIFFA							
DIFFA	75	54	11	69	-28	-85	-8
MAINESOROA	65	110	8	117	68	-88	79
NGUIGMI	51	23	2	27	-54	-96	-47
DOSSO							
BOBOYE	102	91	100	131	-11	-2	28
DOGONDOUTCHI	120	122	76	136	2	-37	13
DOSSO	97	84	55	115	-13	-43	18
GAYA	122	112	82	149	-9	-33	22
LOGA	109	99	58	134	-9	-47	23
MARADI							
AGUIE	139	100	99	128	-28	-29	-8
DAKORO	121	191	100	175	58	-17	45
GROUMDJI	157	80	100	143	-49	-36	-9
MADAROUNFA	115	71	115	165	-38	0	44
MAYAHI	105	93	89	119	-12	-16	13
TESSAOUA	128	106	116	188	-18	-10	47
TAHOUA							
BIRNI N'KONNI	120	178	122	180	49	2	50
BOUZA	105	122	54	119	16	-49	13
ILLELA	94	173	52	94	85	-44	0
KEITA	92	97	55	115	5	-40	25
MADAOUA	127	143	123	163	13	-3	29
TAHOUA	111	65	57	159	-42	-49	43
TCHINTABARADEN	29	58	52	45	97	77	53
TILLABERY							
FILINGUE	113	73	27	151	-35	-76	34
KOLLO	98	99	41	113	1	-58	16
OUALLAM	78	59	28	106	-25	-64	36
SAY	178	115	74	164	-35	-59	-8
TERA	100	81	42	138	-19	-58	38
TILLABERY	76	83	37	98	10	-51	29
ZINDER							
GOURE	128	99	97	184	-22	-24	44
MAGARIA	111	71	78	116	-36	-30	4
MATAMEYE	115	135	72	104	17	-38	-10
MIRRIAH	112	150	94	121	34	-16	8
TANOUT	136	45	170	183	-66	25	35

Source: Ministry of Rural Development, Hydrology, and Environment

[3] The 1991/92-1995/96 average is used to enable comparison of 1996/97, 1997/98,1998/99 to the same 5-yr average.

Urban Populations

The urban populations in most parts of Niger are generally considered vulnerable due to salary arrears, high unemployment, and the closing of projects, private enterprises and the overall decline of the economy. However, a profound analysis of the current food security status of urban populations could not be done due to lack of data on urban wage and the number of unemployed persons except Agadez city and Diffa city that are in chronic vulnerable zones.

Table 5: Populations of Food Insecure Areas in Niger in 1998/99

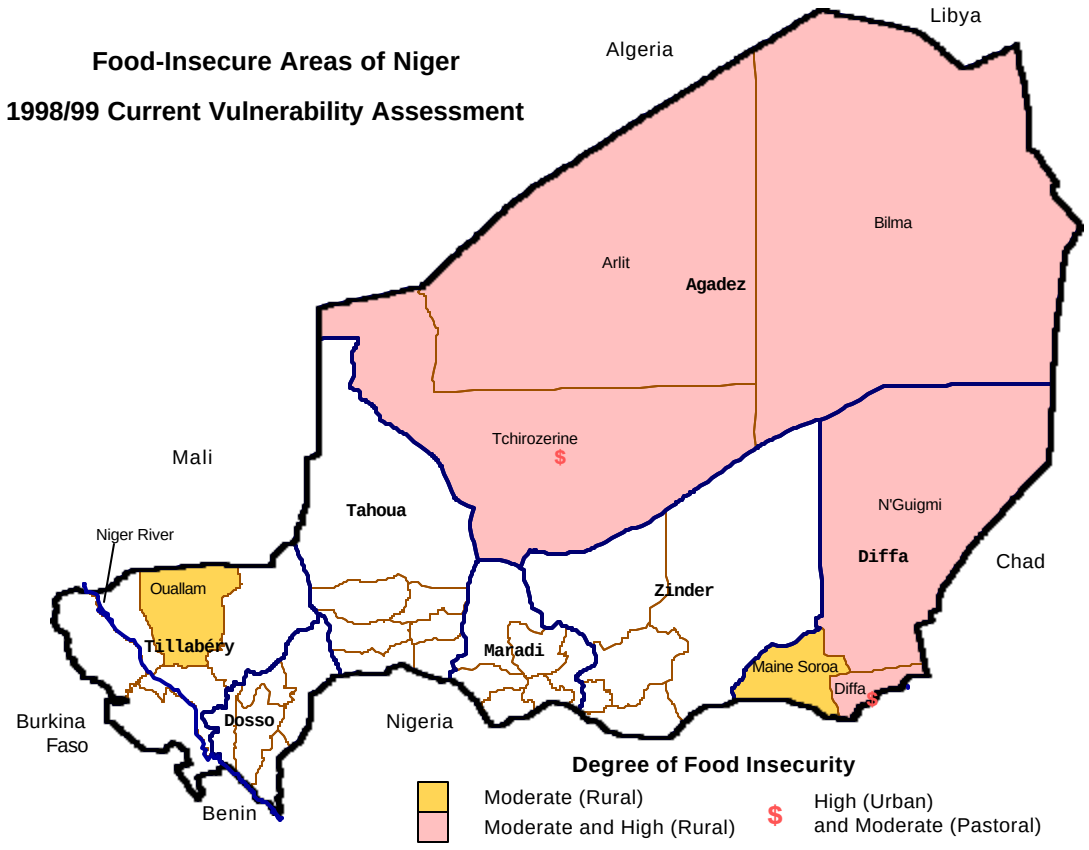
Department/ Arron-dissement	Farmers and agro-pastoralists		Pastoralists		Total	
	Highly	Moderately	Highly	Moderately	Highly	Moderately
Tillabery		245,323		7,899		245,323
Ouallam		245,323		7,899		253,222
Diffa	95,786	84,187		30,551	95,786	30,551
Main Soroa		84,187		8,596		92,783
Diffa	65,177			5,702	65,177	5,702
N'Guigmi	15,525			16,253	15.525	16,253
Diffa City	15,084				15,084	
Agadez	252,637			69,267	252,637	69,267
Tchirozerine	77,505			46,003	77,505	46,003
Arlit	84,837			22,362	84,837	22,362
Bilma	13,019			207	13,019	207
Agadez City	77,276			695	77,276	695
Total	348,423	329,510		107,717	329,510	407,373

Source: FEWS/Niger (Based on MDRHE arrondissement-level population estimates)

E. Caveats, Risk, and Uncertainty

Preliminary harvest estimates compared to post harvest estimates for the last five years indicated that the preliminary harvest estimates were higher ranging from 15 percent in 1993/94 to 24 percent in 1997/98. The post-harvest figures take into account pest damage and other factors that reduce yield. So, the final production result if it is significantly lower than the preliminary harvest, could change the favorable food security situation. In addition, for poor farmers who have depleted their resources over the last 4-5 poor consecutive harvest; for farmers who sold their produces before harvest (as FEWS witnessed in September), their food security situation would not improve as a result of one good harvest. Also, the sharp price decrease after harvest indicate that farmers were obliged to sell their harvests to pay debts and taxes and as a result would rely heavily on the market during the hungry period (March-August). So any change in the normal price pattern should be monitored since even in the cereal producing zones, many farmers are net cereal buyers. In addition, the recent fuel price increase in Nigeria will affect poor households particularly in the Departments of Maradi, Zinder, Dosso and Tahoua , which rely on cheap imported gasoline from Nigeria rather than fuel sold at the gas station. It would

also affect the purchasing of power of the resellers who make their living from the sale of gasoline. Gasoline prices at the station are not affected by the increase since major importers such as ELF, Total, Shell as well as the government of Niger imports gasoline from other parts of the world. This higher price would increase the cost of transportation; cost of cereal price and other basic goods and the food security situation could change. In addition the economic situation in Niger continues to deteriorate, government employees are paid irregularly and have accumulated 5-6 months of salary arrears. The salary arrears have not only affected government employees and their dependents but also traders and small service providers who rely on government employees for their survival. The private sector in Niger is not developed and most of the economic activities are based on government contracts and the financial difficulty of the government affects a wide range of the populations.



Source: FEWS/Niger
Figure 4

IV. Actions Required

Actions needed –populations in the Department of Agadez and Diffa that are highly food insecure need outside assistance preferably in a form of food-for-work programs. The food-for-work programs such as rehabilitation of water sources (a major pre-occupation of the populations) and off-season gardening to diversify their dietary intake will help the populations that have exhausted their resources over the last few years from further depletion. The populations in Ouallam might become highly food insecure, if cereal prices deviates from the normal pattern; if the final production figure is much lower compared to the pre-harvest figure like last year and access or income from secondary activities be compromised as these arrondissements have depleted their assets for the last four to five consecutive years. Most farmers in Niger are net buyers of cereals during the hungry period, even in good production years. However, this year in particular due to poor harvest over the last four-five years farmers were obliged to sell their crops at a lower price right after harvest to pay debts and replace working utensils sold to purchase cereals during the 1997/98 hungry period. Positioning of cereals would facilitate market interventions if conditions deteriorate.

Appendices:

Appendix A. Final Food (Cereal) Balance for 1997/98

Appendix B. Summary Analysis Table

Appendix A. Final Food (Cereal) Balance for 1997/98

Table 6. Final Food (Cereal) Balance for 1997/98

	Rice	Wheat	Traditional Cereals	Total
Population through 4/30/1998				9,,539,000
Availability	40,297	7,303	1,410,894	1,458,494
Production				
Gross production	61,825	8,449	1,651,051	1,721,325
Net production[1]	40,186	7,182	1,403,933	1,450,761
Initial stocks as of 10/1/97	111	121	6,961	7,193
Farmer	0	0	0	0
Other	111	121	6,961	7,193
Needs	96,100	23,500	2,063,195	2,186,318
Human consumption[1]	96,100	23,500	2,041,546	2,161,146
Final stocks	0	0	21,649	25,172
Farmer	0	0	0	0
Other	2,600	923	21,649	25,172
III. Gross Surplus (+) or Deficit (-)	–55,803	–16197	-652,301	-727,824
IV. Imports/Exports	165,561	33,302	402,411	601,274
Commercial Imports	163,123	31,974	386,311	581,408
Food aid	2,438	1,328	16,100	19,866
Exports	0	0	0	0
V. Net Surplus (+) or Deficit (-)	109,758	17,105	-249,890	-126,550
VI. Per Capita Cereal Availability[1] **(kg)**	21.5	4.2	190.0	213.2

Sources: MRDHE, FAO/CILSS

Appendix B. Summary Analysis Table

Admin Unit/Socioeconomic Group			Food Security Status			Direct Access					Indirect Access									
						Own Food Production				Stocks	Market Availability and Prices			Indicators of Income							
ADMIN2	ADMIN3	Farmer/ Agro-pastorlist Population	Current Food Security Status 1998/99	Food Security Status 1997/98	Food Security Status 1996/97	Needs Met Thru Own Food Prod 1998/99 (%)	Needs Met on Avg	%diff 98 vs Avg.	Needs Met Rel to Avg (-2,-1,0,1,2)	Carry Over Stocks Rel to Avg (-2,-1,0,1,2)	Dependence on Market Purchases in 1998/99	Market Availability (2,-1,0,1,2)	Projected Hungry Season Cereal Price Rel to Avg (2, -1, 0, 1, 2)	Type of Cash Crop Income 0-None 1-Niebe 2-Cotton 3-Onion 4-Peanut 5-Peppers	Importance to Income 1-Slight 2-Mod 3-High	Terms of Trade Cowpea for Millet Rel to Avg (%)	Prod Rel to Avg (-2, -1, 0, 1, 2)	Tropical Livestock Per Capita	Importance to Income 1-Slight 2-Mod 3-High	Livestock Prod Rel to Avg (-2, -1, 0, 1, 2)	Terms of Trade Goat for Millet Rel to Avg (-2,-1,0,1,2)
AGADEZ	AGADEZ CITY		MFIS	HFIS	HFIS	2	0		0	0	98	1		0		-20	-1	1			
AGADEZ	ARLIT	33953	MFIS	HFIS	HFIS	6	0		0	0	94	1		0		-20	-1	0.90	3		
AGADEZ	BILMA	9203	MFIS	HFIS	HFIS	0	0			0	100	1		0				2.00	3	-2	
AGADEZ	TCHIROZERINE	68797	MFIS	HFIS	HFIS	14	3	367	2	0	86	1		0		-30	-2	0.05	2	2	
DIFFA	DIFFA	65177	MFIS	HFIS	HFIS	77	58	33	1	0	23	1		5	3	-12	-1	3.27	3	2	74
DIFFA	DIFFA CITY		MFIS	HFIS	HFIS	45	16	181	-1	0	55	1		5							
DIFFA	MAINESOROA	75866	MFIS	HFIS	HFIS	111	47	136	2	0	-11	1						2.64	3	1	91
DIFFA	NGUIGMI	4774	MFIS	HFIS	HFIS	35	25	40	1	0	65	1		0		-14	-1	8.73	3	2	24
DOSSO	BOBOYE	271782	FS	FS	FS	148	93	59	2	0	-48	1		1		-24	-2	0.29	2		-16
DOSSO	DOGONDOUTCHI	399263	FS	FS	FS	107	114	-6	2	0	-7	1		1		-34	-2	0.32	2	-1	-13
DOSSO	DOSSO	299331	FS	FS	FS	76	78	-3	2	0	24	1		1		-44	-2	0.30	1	0	4
DOSSO	DOSSO CITY		FS	FS	FS	17	27	-37	-1	0	83	1		1							
DOSSO	GAYA	204643	FS	FS	FS	103	109	-6	2	0	-3	1		1		-33	-2	0.22	2	0	-13
DOSSO	LOGA	113848	FS	FS	FS	77	95	-19	2	0	23	1		1				0.22	2	-1	-21
MARADI	AGUIE	230100	FS	FS	FS	121	125	-3	1	0	-21	1		1,4	2	-28	-2	0.61	2	1	-9
MARADI	DAKORO	311906	FS	FS	FS	169	133	27	2	0	-69	1		1,4	2	-25	-2	0.29	2	1	7
MARADI	GROUMDJI	278051	FS	FS	FS	119	127	-6	2	0	-19	1		1,4	2	-29	-2	0.59	2	-1	-9
MARADI	MADAROUNFA	256913	FS	FS	FS	178	107	66	2	0	-78	1		1,4	2	-30	-2	0.26	2	0	-9
MARADI	MARADI CITY		FS	FS	FS					0	100	1		1,4	2	-31	-2				
MARADI	MAYAHI	305238	FS	FS	FS	97	97	0	2	0	3	1		1,4	2			0.34	2	1	
MARADI	TESSAOUA	266822	FS	FS	FS	273	110	148	2	0	-173	1		1,4	2	-25	-2	0.38	2	-1	-5
TAHOUA	BKONNI	280673	FS	FS	FS	142	126	13	2	0	-42	1		1,2,3	2	-34	-2	0.48	2	1	-9
TAHOUA	BOUZA	219360	FS	MFIS	FS	115	90	28	2	0	-15	1		4		-25	-2	0.68	2	2	-28
TAHOUA	ILLELA	202398	FS	MFIS	FS	95	105	-10	-1	0	5	1		1,4		-40	-2	0.67	2	-1	-8
TAHOUA	KEITA	190719	FS	FS	FS	118	80	48	2	0	-18	1		1		-42	-2	0.80	2	2	-6
TAHOUA	MADAOUA	253245	FS	FS	FS	198	125	58	2	0	-98	1		1,2,3	2	-26	-2	1.06	2	0	-22

Admin Unit/Socoieconomic Group			Food Security Status			Direct Access					Indirect Access									
						Own Food Production				Stocks	Market Availability and Prices			Indicators of Income						
ADMIN2	ADMIN3	Farmer/ Agro-pastorlist Population	Current Food Se-curity Status 1998/ 99	Food Se-curity Status 1997/ 98	Food Se-curity Status 1996/9 7	Needs Met Thru Own Food Prod 1998/ 99 (%)	Needs Met on Avg	%diff 98 vs Avg.	Needs Met Rel to Avg (-2,-1,0,1, 2)	Carry Over Stocks Rel to Avg (-2,-1,0,1,2)	Depen-dence on Market Pur-chases in 1998/9 9	Market Avail-ability (2,-1,0,1,2)	Project ed Hungry Season Cereal Price Rel to Avg (2, -1, 0, 1, 2)	Type of Cash Crop Income 0-None 1-Niebe 2-Cotton 3-Onion 4-Peanut 5-Peppers	Import-ance to Income 1-Slight 2-Mod 3-High	Terms of Trade Cowpea for Millet Rel to Avg (%)	Prod Rel to Avg (-2, -1, 0, 1, 2)	Trop-ical Live-stock Per Capita	Import-ance to Income 1-Slight 2-Mod 3-High	Live-stock Prod Rel to Avg (-2, -1, 0, 1, 2)	Terms of Trade Goat for Millet Rel to Avg (-2,-1,0,1, 2)
TAHOUA	TAHOUA	233798	FS	MFIS	FS	108	86	26	2	0	-8	1		1,3	1	-32	-2	0.79	2	1	23
TAHOUA	TAHOUA CITY		FS	FS	FS	26	16	63	2	0	74	1									
TAHOUA	TCHINTABARADE	56421	MFIS	MFIS	HFIS	61	40	53	1	0	39	1		1	1	-30	-2	1.56	3	-1	-24
TILLABERY	FILINGUE	349592	FS	HFIS	FS	124	94	32	2	0	-24	1		1		-30	-2	0.49	2	-1	-25
TILLABERY	KOLLO	296746	FS	MFIS	FS	160	88	82	2	0	-60	1		1		-49	-2	0.30	2	-1	-10
TILLABERY	NIAMEY CITY		FS	MFIS	FS	5	4	36	1	0	95	1		1		-26	-2				
TILLABERY	OUALLAM	237024	FS	HFIS	HFIS	119	50	138	2	0	-19	1		1				0.45	2	-2	23
TILLABERY	SAY	204686	FS	MFIS	FS	189	156	21	2	0	-89	1		1		-33	-2	0.41	2	0	16
TILLABERY	TERA	346449	FS	MFIS	FS	150	74	103	2	0	-50	1		1		1	0	0.31	2	0	-30
TILLABERY	TILLABERY	185489	FS	HFIS	HFIS	113	53	113	2	0	-13	1		1		-16	-1	2.29	2	-2	
ZINDER	GOURE	174467	FS	MFIS	HFIS	166	101	64	2	0	-66	1		1	2	-1	0	1.34	3	2	9
ZINDER	MAGARIA	445231	FS	FS	FS	109	93	17	2	0	-9	1		1	2	-14	-1	1.17	2	1	27
ZINDER	MATAMEYE	203694	FS	FS	FS	93	100	-7	1	0	7	1		4,1	2	9	1	0.78	2	-1	17
ZINDER	MIRRIAH	535074	FS	FS	FS	123	108	14	2	0	-23	1		1,4		-35	-2	0.11	2	-1	22
ZINDER	TANOUT	223547	FS	MFIS	HFIS	197	121	63	2	0	-97	1		1	2	-26	-2	0.67	2	-1	16
ZINDER	ZINDER CITY		FS	FS	FS	23	10	130	2	0	77	1				-5	-1				